

## **II. REMARKS**

Claims 1-31 are pending. The Applicants' attorney has amended claims 1-17, 20, 22-24, and 26. But these amendments add no new matter to the patent application, and the amendments to claims 2-14, 16-17, 24, and 26 do not narrow these claims. In light of the following, all of the claims as amended are now in condition for allowance, and, therefore, the Applicants' attorney requests the Examiner to withdraw all of the outstanding rejections. But if after considering this response the Examiner does not allow all the claims, the Applicant's attorney requests that the Examiner contact him to schedule a teleconference to further the prosecution of the application.

### **Allowable Subject Matter**

The Applicants' attorney has rewritten claims 3, 7, 9, 11, and 17 in independent form to put claims 3-14 and 17 in condition for allowance. But the Applicants' attorney does not necessarily agree with the Examiner's reasoning as to why claims 3-14 and 17 recite patentable matter.

### **Priority Document**

The Applicants' attorney encloses a certified priority document for European Patent Application No. 02425509.3. The Applicants' attorney previously submitted the priority document for European Patent Application No. 02425510.1, and the Examiner has acknowledged receipt of this latter priority document.

### **Incorporation Of Material In The Specification**

The Examiner has objected to the specification as incorporating essential material from the foreign priority documents, European Patent Application Nos. 02425510.1 and 02425509.3. But because the material within these documents is cumulative to the material disclosed in the patent application as filed, the material within these documents is not essential to the patent application. Furthermore, incorporation of a non U.S. Patent document by reference for nonessential material is permitted.

Consequently, incorporation of the above-listed foreign priority documents is proper.

### **Objection To The Drawings**

The Applicants' attorney has added the legend "Prior Art" to FIG. 1 as requested by the Examiner, and encloses a replacement sheet of drawings that includes FIG. 1 as amended.

The Applicants' attorney has also swapped "+" and "-" for the summer that adds signals A4 and Se in FIG. 14, and encloses a replacement sheet of drawings that includes FIG. 14 as amended. Support for this correction is found in paragraph 63 of the patent application.

The amendments to FIGS. 1 and 14 add no new matter to the patent application.

### **Objection To Claim 2**

The Applicants' attorney has amended claim 2 to overcome this objection.

### **Rejection of Claims 1-2, 15-16, and 18-31 Under 35 U.S.C. § 102(a) As Being Anticipated By Applicants' Admitted Prior Art (FIG. 1)**

As discussed below, the Applicants' attorney traverses this rejection.

### **Claim 1**

Claim 1 recites control means capable of prolonging a period of the switched-on time of a power transistor at the instants of time in which an alternating main voltage assumes a value that is substantially zero.

For example, referring to FIGS. 4-6B and paragraphs 36-49 of the patent application, a circuit 100 prolongs the on time of the power transistor M when the amplitude of the sinusoidal input voltage  $V_{in}$  is near its crossover points, *i.e.*, zero volts. By increasing the on time of the transistor M during these crossover periods of  $V_{in}$ , the

inductor L can provide more current to the load during these periods, thus reducing distortion and more evenly distributing the load on the network that provides  $V_{in}$ . More specifically, the circuit 100 prolongs the on time of the transistor M by generating on the inverting (-) node of the comparator 5 a negative offset voltage, which increases the time before the voltage on the inverting (-) node exceeds  $S_m$  and causes the flip-flop 11 (FIG. 1) to turn off the transistor M.

In contrast, the control device of FIG. 1 is incapable of prolonging the on time of a power transistor at the instants of time wherein an alternating network voltage substantially takes on the value zero. Referring to FIG. 1 and paragraphs 16-17 of the patent application, not only is the control device 1 incapable of prolonging the on time of the transistor M when the amplitude of  $V_{in}$  is near its crossover points, *i.e.*, zero volts, the control device shortens the on time of the transistor M by reducing  $S_m$  when the amplitude of  $V_{in}$  is near its crossover points.

## **Claim 2**

This claim is patentable by virtue of its dependency on claim 1.

## **Claim 15**

Claim 15 recites a distortion-reducing circuit operable to lengthen the on period of a power transistor as the amplitude of an input signal decreases.

For example, referring to FIGS. 4-6B and paragraphs 36-49 of the patent application, a circuit 100 lengthens the on period of the power transistor M as the amplitude of the sinusoidal input voltage  $V_{in}$  decreases. More specifically, as  $V_{in}$  decreases while its amplitude is near zero volts, the offset voltage on the inverting (-) node of the comparator 5 becomes more negative, thus increasing the time before the voltage on the inverting (-) node exceeds  $S_m$  and causes the flip-flop 11 (FIG. 1) to turn off the transistor M.

In contrast, not only is the control device 1 of FIG. 1 incapable of lengthening the on period of the transistor M as the amplitude of  $V_{in}$  decreases, the control device

shortens the on time of the transistor M as the amplitude of  $V_{in}$  decreases. Referring, e.g., to FIG. 5 of the patent application, the multiplier 4 generates  $S_m = V_i \times S_e$ . As  $S_m$  increases, the on period of the transistor M increases, and as  $S_m$  decreases, the on period of the transistor M decreases. Consequently, because  $V_i$  is proportional to  $S_m$  and  $V_{in}$  is proportional to  $V_i$ , it follows that as  $V_{in}$  decreases, the on period of the transistor M decreases, unlike the claimed on period, which increases with a decreasing input signal.

#### **Claims 16 and 18-19**

These claims are patentable by virtue of their dependencies on claim 15.

#### **Claims 20, 22, and 23**

These claims are patentable for reasons similar to those recited above in support of the patentability of claim 15.

#### **Claims 21 and 24-31**

These claims are patentable by virtue of their respective dependencies on claims 20 and 23.

### **Statutory Double Patenting**

The Applicants' attorney traverses this rejection as discussed below.

#### **Claim 1**

Claim 1 of the present application recites determining the switched-on time of a power transistor in response to a regulated voltage.

In contrast, claim 1 of the 10/633,322 application merely recites determining the switch-on time of a power transistor, and thus lacks the limitation of determining the

switched-on time in response to a regulated voltage.

Consequently, because claim 1 of the present application and claim 1 of the 10/633,322 application have different scopes, a statutory double patenting rejection is improper.

### **Claim 15**

Claim 15 of the present application recites an error circuit operable to periodically activate the power switch for an on period that is related to input and output signals.

In contrast, claim 11 of the 10/633,322 application merely recites an error circuit operable to periodically activate the power switch for an on period that is related to an output signal, and thus lacks the limitation of the on period also being related to an input signal.

Consequently, because claim 15 of the present application and claim 11 of the 10/633,322 application have different scopes, a statutory double patenting rejection is improper.

### **Claims 20 and 22**

Claims 20 and 22 differ from claims 17 and 18, respectively, of the 10/633,322 application in a manner similar to the manner in which claim 15 of the present application differs from claim 11 of the 10/633,322 application.

Consequently, because claims 20 and 22 of the present application and claims 17 and 18, respectively, of the 10/633,322 application have different scopes, a statutory double patenting rejection is improper.

### Conclusion

In light of the foregoing, claims 18-19, 21, 25, and 27-31 as previously pending and claims 1-17, 20, 22-24, and 26 as amended are in condition for full allowance, which is respectfully requested.

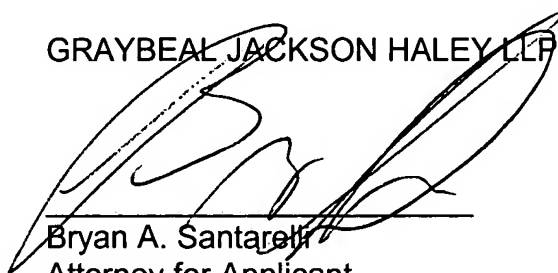
In the event additional fees are due as a result of this amendment, payment for those fees has been enclosed in the form of a check. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

If the Examiner believes that a phone interview would be helpful, he is respectfully requested to contact the Applicant's attorney, Bryan Santarelli, at (425) 455-5575.

DATED this 9<sup>th</sup> day of February, 2005.

Respectfully Submitted,

GRAYBEAL JACKSON HALEY LLP

A large, stylized handwritten signature in black ink, appearing to read 'B. Santarelli', is written over a horizontal line.

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**In the Drawings:**

Please substitute the attached **FIG. 1** and **FIG. 14**, each labeled Replacement Sheet, for the originally filed **FIG. 1** and **FIG. 14**, respectively. The **FIG. 1** Replacement Sheet includes the "(PRIOR ART)" indicator, and the **FIG. 14** Replacement Sheet swaps "+" and "-" for the summer that adds signals **A4** and **Se**.